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ABSTRACT

While the charge that standardized tests are biased is not new, critics (including feminists) recently have made accusations of gender bias. One argument for the superior performance of males on the Scholastic Aptitude Tests (SAT), the Preliminary Scholastic Aptitude Test/National Merit Scholarship Qualifying Test (PSAT/NMSQT), and the American College Testing Assessment Exam (ACT) is that males and females study different subjects. FairTest, the National Center for Fair and Open Testing, makes the opposing argument that such tests tend to obscure the real differences in ability that may exist. One consequence of a lack of sustained research into sex-related differences coupled with nonsubstantiation of a biologically related female verbal advantage may be that the anti-female bias of the conclusions from some studies will stand, and standardized tests will not be examined for gender bias. Girls have been penalized, not rewarded, for verbal skills and have been blamed for creating an atmosphere that contributes to boys' failing. Girls begin to test less well than boys in secondary school even while receiving higher grades. Various responses have been made to what is perceived as abusive practices in assessment: (1) educators and advocates are calling for national regulation of testing; (2) it has been suggested that the age of admission to primary school be reconsidered; (3) states are introducing legislation to reduce the number of tests and the time spent on them; and (4) special interest groups have threatened lawsuits. (Eighty references are attached.)
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Gender and Reading Assessment

ED320116 To use or not to use standardized tests for assessment has become a major question. Instruments that measure progress in the basic skills are currently being reexamined and reevaluated. Reading, one of the basic skills, has been characterized as the most difficult to assess (Wood, 1989). Standardized instruments that evaluate this skill have been faulted for still measuring reading as an aggregate of sequential component skills rather than as an active process of text analysis and construction of meaning (Valencia and Pearson, 1987).

A second criticism of tests is that they are overused and misused. In 1986-87 more than 100 million standardized tests were administered in the nation's schools, and districts with the largest minority enrollments tested most often (Morganfield, 1988). President of the American Federation of Teachers, Albert Shanker (1989) claims that one reason for the high drop out rate from secondary schools as well as the graduation of too few students who can really do college level work is an emphasis on such tests. Consumer advocate Ralph Nader (1987) has said that these tests are leading to standardized minds, standardized thinking and standardized curriculum. He even says that overtesting is leading to test driven conformity in the nation's schools.

CS010110 Measurement of verbal ability begins in kindergarten, continues through high school to post secondary institutions. In too many

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instances, the instruments have become the primary criteria for decisions influencing retention, promotion, placement, tracking, awarding of scholarships and selection for undergraduate and graduate programs. They account, in no small way, for disproportionate representation of low income and minority children in no exit low level tracks in the public schools, and for overrepresentation of boys and underrepresentation of girls in science and mathematics courses at almost every stage of the academic pipeline.

Standardized tests like the Gesell School Readiness Test, the Metropolitan Achievement Test and the Nelson-Denny Reading Test are used in school systems throughout the country. At the post secondary level, municipalities and state legislatures have mandated batteries of basic skills tests for admission and continuation in tax state supported institutions. Among the instruments are the Descriptive Test of Language Skills (DTLS) which is administered to all entering freshmen at twenty two colleges of the City University of New York and the Texas Academic Skills Program, Reading Section (TASP) which is used in the lone star state. These tests function as gatekeepers to determine who will attain upper-level status and will be debarred from the institution. Qualifying examinations like the Graduate Record Examination and the Law Schools Admissions Test are used similarly to designate who can enroll in graduate school.

A third criticism of assessment, one which has received too little attention from scholars in the field of reading, is test bias.

A consideration of test bias introduces another question, the who of testing. Though the April 1987 guest edited issue of The Reading Teacher reviewed the state of reading assessment, none of the articles addressed gender bias in reading tests. That standardized tests are biased is not a new charge. For decades, civil rights leaders have claimed that there is a pervasive racial bias in the instruments. Most recently, however, critics, including feminists, have made an accusation of gender bias. Not only has a male bias been found in sex role stereotyping but in topic revision which handicaps females. For instance, the verbal section of the Scholastic Aptitude Test (SAT), possibly the most important college qualifying examination, contains more topics that advantage males than female. Girls perform better when the item content consists of the arts and humanities and human relations, and boys when the content is scientific, mathematical, business, human relations or practical affairs (Dwyer, 1976). The verbal section of the SAT has been altered to include more of the latter with the result that males now outscore females on both the verbal and quantitative sections. In addition, males score better on the Preliminary Scholastic Aptitude Test/National Merit Scholarship Qualifying Examination (PSAT/NMSQT) and the American College Testing Assessment Exam (ACT).

ARGUMENTS FOR THE DIFFERENT PERFORMANCE

One argument for the unequal performance is that males and females study different subjects. Girls spend more time with social studies, literature and the arts; boys with mathematics and

science. When tests are taken the kind of knowledge that boys have accumulated pays off. Donald Stewart (1988) President of the College Board, has said that different scores for women and minorities on the SAT reflect societies inequities, not the tests. He further says that the test is a check against subjective arbitrary academic judgments in admissions.

An opposing argument is that of FAIRTEST, the National Center for Fair and Open Testing. FAIRTEST states that test alteration tends to obscure the real differences in ability that may be present. College admission examinations systematically underpredict the abilities of high school girls, who comprise 52 percent of the test takers. The Center has charged that bias in content has resulted in: diminished opportunities for young women to enter special programs, fewer chances to get college tuition assistance and lower admission rates to more than 1500 colleges and universities.

Throughout the elementary school years, girls consistently attain higher scores on all kinds of measures of verbal acuity. Beginning with reading readiness (Anderson, Hughes, and Dixon, 1957) and throughout the primary grades, girls show superior achievement in normal classroom situations (Dykstra and Tinney, 1969; Dwyer, 1980). By age eleven, they out perform boys in spelling, talkativeness, comprehension of difficult text, and understanding logical relations (Droege, 1967). They also perform better on tests of verbal fluency, analogy and anagrams (Matlin, 1987). As early as 1932, it was noted that boys significantly out numbered girls in remedial reading classes

and had higher rates of dyslexia (Rutter and Yule, 1975; Singleton 1977; Finucci and Childs, 1981; Holbrook, 1988). But the most important and consistent measure of female academic ability has been grades. Regardless of performance on standardized tests, girls have gotten better grades at all levels of the academic pipeline. This discrepancy between girls' grades and performance on standardized instruments has not, until recently, suggested that something might not be quite right with the tests or a call for reform in test construction. In the main, girls have been unrewarded for their abilities.

NATURE OR NURTURE - AGAIN

On the other hand, from age eleven, boys score higher than girls on tests of visual-spatial and quantitative abilities. Sex differences in cognitive ability which appear consistently at adolescence form the basis of the nature/nurture debate with the formulation of two hypotheses to account for gender differences in cognition: biological and socio/cultural. The biological proposition is that cognitive sex differences may be attributed to specialization of the two hemispheres of the brain. The left hemisphere of the cerebral cortex governs language functions in right handed people; whereas, the right hemisphere governs visual/spatial information. Two theories of lateralization have been proposed. Buffery and Gray (1972) theorized that the left half first becomes efficient at verbal tasks and less efficient at visual. They argue for left hemisphere dominance in females due to earlier female maturation. They claim that spatial skills

benefit from bilateral representation across both hemispheres. Levy (1972) and Waber (1979), on the other hand, proposed that strong lateralization in the right hemisphere, not bilateralization, accounts for spatial skill. Subsequent studies have supported right hemisphere dominance or stronger lateralization in males. Females are more likely to be bilateralized and, therefore, weaker at spatial tasks (Bryden, 1979; McGlone, 1980, Petersen, 1980).

Lateralization theory, as yet, is considered an inadequate explanation of the sex differences in verbal ability (Henley, 1985; Matlin, 1987); therefore, socio/cultural/educational theorists are far more influential in their claim that the female verbal advantage is peculiar to North America. They cite cross cultural studies which indicate higher reading achievement for males (Downey, 1982; dePilllis and Singer, 1985). It is argued that sex role socialization may serve to make it likely that boys will be good at tasks involving spatial and quantitative skills while reenforcing verbal and fluency skills in girls. In spite of research and theory, the way that children acquire sex-typed behaviors is still a mystery (Roopnarine and Mounts, 1987). Petersen (1980) claims that socialization as a male and female is reinforced in a myriad of ways with the stereotyping of both role models and tasks and skills.

It has been asserted that sex role stereotypes affect performance on cognitive tasks by influencing the perception of the task (Singleton, 1987). Performance is generally superior on tasks perceived as sex-appropriate and inferior on tasks seen as sex-

inappropriate (Montemayor, 1974; Stein, Pohly and Mueller, 1971). Furthermore, males are more likely to expect to do well in male-typed intellectual areas while females expect to do less well on masculine tasks (Deaux and Emswiller, 1974; Frieze, 1975; Lennney, 1977).

AND THE BIAS

It was asserted a decade ago that research into sex related differences was in its infancy (Weitzman, 1979); however, a survey of ERIC (1979-1989) discloses that the research also peaked at that time. One consequence of a lack of sustained study coupled with nonsubstantiation of a biologically related female verbal advantage may be that the anti-female bias of the conclusions from some studies will stand, standardized tests will not be examined for gender bias, and the quiet, studious reading girls will remain invisible. Statements offered in explanation of male inferior reading achievement are as much biased against the female teacher as tests are biased against girls. Girls have been penalized, not rewarded, for verbal skill and women have been blamed for creating an atmosphere that contributes to boys failing.

The sex appropriate /inappropriate hypothesis has generated assertions that the female environment of the lower school is responsible for the failure of boys to achieve at the same level as girls. It is claimed that boys rebel, do poorly in verbal assignments, and view the school environment as an inappropriate place for competition and achievement. Two thirds of grade

repeaters are boys (Frazer and Sadker,1973);Johnson, 1976). Sexton (1969) has said that boys who absorb school values risk becoming feminized. Those who resist court failure. It is also stated that boys view reading as a feminine activity (Sheridan and Fizdale, 1981)) and that the content of school readers are of less interest to boys (Zimet, 1976; Singleton, 1987). Reading, which does not confirm male superiority, has been sex typed as a female skill. Thus males do less well in this activity.

Such assertions offer little to rectify the situation and blame the victim. First, until the last fifteen years, the male stereotype and image was the norm in popular children's literature and in basal readers. The female image has expanded to include the working women. This should obviate the "sissy" stereotype of reading. Second, It is difficult to believe that reading is perceived as a female skill when the majority of those who have received the greatest benefits from being literate are males. The dominant images in this culture are literate males. Most well-known novelists, playwrights, scholars and political/historical figures have been male. George Washington and Benjamin Franklin read. Abraham Lincoln was both an eloquent writer and orator. Youngsters learn about these male models long before they enter school. It must be clear to them that leaders of revolution and major events are men who read.

Boys must know that prestigious, lucrative positions in society are conferred upon men who are literate. The majority of radio

and television news and sports commentators are men. The majority of prominent newspaper and magazine journalists are male. Actors read and interpret the written word. John Wayne was literate as is Sylvester Stallone. Most of the prizes for scholarship and literature as well as science have been given to men. And surely, fathers read. They do not hide in the closet when perusing books and newspapers. Boys and girls enjoy bedtime stories read by their mothers and fathers. Research indicates that both parents treat their sons and daughters differently (McGuire, 1982); however, neither parent discourages literacy.

Third, the school marm is much maligned for performing the role women were recruited to do. School reformers of the early nineteenth century intended the infant and primary schools to be extensions of the home and the teacher a mother surrogate. Prior to reform, the teachers on the public payroll were men. After reform, women replaced men as the lowest paid public servants. The failure of boys to achieve at the same or higher level as girls, however, may be one reason for the revisions of teacher education currently underway.

The drive to change teacher preparation and raise salaries is one response to the technological revolution's requirement of a more skilled worker and the spread of information technologies into the classroom. Computer literacy requires earlier and sustained access to mathematics, science and computer courses. Though attention is given to the male verbal disadvantage and

tests changed to minimize it, as yet there has been no dramatic increase female participation in quantitatively based areas. Females, particularly minority females, do not yet have access to even the basic mathematics courses in high school (Syron, 1987). The failure of women to gain command of the language of technology, may lead to a defeminization of the lower schools as well as the high schools, and even less attention to girls' strengths.

Fourth, boys have received a great deal of attention for not achieving. They dominate the remedial reading classes. Yet, the inadequate performance of girls in quantitative areas was viewed as the norm.

GIRLS DO NOT TEST AS WELL

If the lower school is dominated by female teachers, the high school is not. And it is in the secondary school that girls lose ground to boys. They begin to test less well on standardized instruments even while receiving higher grades. Girls are over represented in the upper ability ranges (Maccoby and Jacklin, 1975), and, in most subjects, earn higher grades than boys (Stockard, 1980). There has been little verification of the theory that girls fear success. The results of Matina Horner's pioneering study have never been replicated.

But females do not test as well as males. They do not score as well on the reading tests that count the most. Since 1986, girls have averaged 61 points below boys on the SAT. They score 50 points lower in mathematics, and 11 points less on the verbal.

Girls also get a lower rating on the Educational Testing Service's Preliminary Scholastic Aptitude Test/National Merit Scholarship Qualifying Test (PSAT/NMSQT). In 1985-86, girls average PSAT/NMSQT score was 53 points lower. On a third test, the American College Testing Program's ACT Assessment, women scored higher only on the English subtest, but overall they averaged 6.0 ACT units lower than men. Male oriented content has not only been the norm for readers but for standardized tests as well.

If high school grades and academic standing were considered more and test scores less, females would get a larger share of the rewards that proceed from high scholastic achievement. Of the hundreds of scholarships tied to test scores, the most prestigious is the National Merit Scholarship Program. In 1985-86, only 36% of National Merit Scholarship participants were women. In 1987, for every \$15 that went to boys only \$8 went to girls. Also, on the basis of tests, less well qualified males are admitted more often to college and men with low undergraduate grades are admitted more often to graduate school because they test better.

RESPONSE TO INEQUITIES IN TESTING

Various responses have been made to what is perceived as abusive practices in assessment. Increasingly, educators and advocates are calling for national regulation of testing, some have stated that standardized tests should be abolished. AFT's Albert Shanker (1988) goes so far as to call for a National Bureau of Educational Weights and Measures. Among its functions would be the appro-

val of tests before their marketing, the publishing of a "critical directory" of tests, and finding better ways to measure knowledge; the International Reading Association's Delegates Assembly passed a resolution opposing the proliferation of tests that measure reading as discrete skills (Thelen, 1990); and even the Educational Testing Service (ETS) has admitted the need for change. A spokesperson agrees that traditional assessments do not accomplish all that can be done (Winn, 1990).

It has even been suggested that the age of admission to primary school may need to be reconsidered. For instance, Donna Connell (1987), a primary school teacher suggests that more flexible grouping and a change in the system of admission to kindergarten would alleviate some of the problems. She believes that the admission age to kindergarten is arbitrary. A new five year old may have to compete with an almost six year old. on the other hand, she says that schools in New Zealand allow children to enter school whenever they reach five regardless of when that occurs during the school year. In Britain, elementary school children are placed in age groups that span three years instead of our 12 month block. Though there is little advocacy for boys entering school at a later age, that may be a way to equalize differences in verbal ability.

FairTest, the National Center for Fair and Open Testing, believes that the use of the Golden Rule would achieve more equitable results for women on such tests as the SAT. Originally resulting

from an agreement between the Golden Rule Insurance Company, ETS and the State of Illinois, the agreement requires that within groups of equally difficult items in the same content area, test publishers must select the items that show the least difference in correct answer rates between majority and minority test takers. This is a reverse of the procedure followed by ETS. ETS employs a statistical technique that selects items that maximize the differences between high and low test takers. FairTest claims that such items do not necessarily measure logic and reasoning ability, but information specific to the middle class. The other method assures that the tests measure real knowledge differences and not irrelevant culturally specific information (FairTest Examiner, 1987).

States are introducing legislation to reduce the number of tests and time spent on them and one state, Michigan, has taken steps to alter assessment procedures (Wixson, et al., 1987). The Michigan Educational Assessment Program adopted three objectives for its testing program based upon the new definition of reading as a meaning constructing process. It contracted with the Michigan Department of Education and the Michigan Reading Association to develop a blueprint and prototype for a testing program based upon the evaluation of reading in a holistic manner with materials representative of those used in the classroom.

Special interest groups have threatened law suits. The Mexican American Legal and Educational Fund (MALDEF) is considering one on behalf of the Hispanic students attending state supported colleges in Texas. MALDEF claims that the Texas Academic Skills

Program, Reading Test (TASP) limits higher education opportunities for Hispanic students by preventing them from attaining junior level status. As it is, up to 93% of black and 87% of Hispanic students fail the TASP. In New York State, a federal judge ordered the state to change its method of awarding Empire and Regent Scholarships by using a formula that gives equal weight to grade point averages and standardized test scores (Glaberson, 1989). The result has been a narrowing of the gap between male and female recipients of both scholarships (Kolbert, 1989).

It has been noted that verbal performance on the SAT has declined over the last several years. In 1989, the average score on the SAT fell by another point. Television was indicted once again as the culprit. College Board officials say that there is a declining interest in reading in favor of television (Hildebrand 1989). But if there is less interest, it may be only among males who read only what is assigned and thus do not practice the skill of reading. It may also be that changing the content of the test to obscure the female verbal advantage has contributed to the overall lower performance that is occurring.

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